

**MULTIPLEXED DATA TRANSMISSIONS THROUGH A  
COMMUNICATION LINK**

ABSTRACT OF THE INVENTION

5 A communication technique enables the efficient transmission of data through  
a communication link having a large delay bandwidth product and/or a high bit error  
rate. The communication technique multiplexes data from one or more data sources  
through a plurality of communication connections to increase the overall throughput  
and to reduce the average data transfer delay of the communication link. Each  
communication connection has a set of communication connection parameters that  
10 may be uniquely configured so that each connection carries a particular type of data at  
a particular effective priority level. Each communication connection may be uniquely  
configured to have a particular sending buffer size, to deliver messages having a  
particular length to an underlying layer and to send the messages into the link at a  
particular rate to orchestrate the manner in which the communication connections  
15 send data through the link.